

**Developmental Paper
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Can Artificial Intelligence identify the critical performance measures for succession planning in Family Businesses?

Abstract; This developmental paper aims to explore how Artificial Intelligence (AI) can use to help Family Businesses (FB) to make difficult decisions by identifying the critical performance measures during the succession process. Even though the AI has been widely used to support of decision-making by mimicking the behaviour of human, in many areas it still needs human control and supervision. Specifically, for human resource management, AI uncovers the trait and skills that need to be evaluated in order to choose the best candidate. Even though the succession process is an internal process and hardly depend on primogeniture in FBs, this publication will motivate and inspire family business members and scholars to explore how AI can be used in family business' decision-making process by identifying and using critical performance measures. From a theoretical perspective, this research extends the decision-making process by using AI by using "Integrated Leadership development and Succession Planning "model of Bozer (2017) as an umbrella model in order to achieve the objectives of the research, the study uses the Delphi technique to engage and collect the data needed to shed light in the success process used by family businesses.

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Track; *Performance Management*

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Introduction

This developmental paper aims at emphasising the need for further academic conversation and research on the usage of AI on FB succession process. Even though there has been an increased interest in the application of AI in recent years, it is still being argued that whether it should be used for the automation or augmentation. As suggested by many researchers (Duan, Edwards and Dwivedi, 2019; Wilson and Daugherty, 2022; Jarrahi, 2018; Miller, 2019) in order to get most value from AI, it should be used at providing augmentation in supporting human judgement rather than decision automation. Therefore, the study advances the following questions: Can AI help make better decision by identifying the critical performance measures for succession planning in FBs? When it would be most appropriate to apply AI during the succession process, which stage or stages are most appropriate to apply AI in order to check the performance measures and can AI resolve the challenge some succession biases like gender issues, daughter exclusion etc.

Artificial Intelligence in Decision-Making Process

In recent years, there is a growing body of research exploring how Artificial Intelligence (AI) has changed the business landscape and it is becoming a hot topic business research. AI enables

machines and systems to do things that would require intelligence if done by humans (Cao et al., 2021). Therefore, it is used as a tool widely from supporting the e-commerce, financial operations, marketing management, after sales services then business communication (Ruiz-Real, 2021; Getchell et al., 2022) by using techniques for enriching decision support through coordinating data delivery, analysing data trends, providing forecasts, qualifying uncertainty, providing information to the user in the most appropriate forms and suggesting course of action (Philip-Wren and Jain, 2006). Even though, most research focus on how AI aids better decision making, there is still lack of research on managers' attitudes and intentions to use AI for decision making (Cao et al., 2021). AI has become more popular when we consider big data users. It has help users to automate and improve complex predictive and descriptive data analysis that would have been time consuming to performed by humans (Surya, 2019). In a broad range of management processes, decision making process is based on Big Data analysis. Moreover, many decision makers want to automate decision making processes by taking advantage of new technologies such as AI (Cao et al., 2023) However, studies show that full human to AI delegated decision making is still inaccessible and unacceptable to all business operations. Even though AI based algorithms are used in many management areas, important decision-making processes still rely on the guidance of human decisions.

Decision making (DM) is considered one of the most important processes for the success of any businesses and as it is defined by Wu et al., (2023), strategic decision making is the art of possibility and AI could offer surprising insights beyond anyone's imaginary boundary. In the decision-making literature, several types of decision-making process have been examined. However, strategic, tactical, and operational DM processes are considered as the main three types of DM. Strategic DM is seen as the responsibility of the top management team and it deal with concerns which are essential to the survival of the organisation. While strategic decision deals with long term plans, tactical DMs deals with medium term plans and strategies. On the other hand, operational DM processes are deal with day-to-day operations. As mentioned by Shrestha et al., (2019), choosing the most appropriate decision-making structure has important implications for organisational performance. According to Nutt (1984), decision-making processes is made up of a set of activities that begins with the identification of an issue and ends with action; Same as succession in Family Businesses (FBs). Succession is one of the most important strategic decisions that considered as a process not an action and comprises lots of activities that begins with the identification of the best candidate for transitioning ownership of the FB. This intergenerational succession should be initiated and planned to let a younger generation of family members take over the business. Choosing the right candidate has been examined as one of the most researched topics in FB literature, even though primogeniture continues to dominate the value system of FBs.

Succession Process in Family Businesses

Rovelli et al., (2022) analysed 1381 papers published in Family Business Review (FBR), Journal of Family Business Management (JFBM), and Journal of Family Business Strategy (JFBS) as three dedicated journals in Family Business area from 1988 to 2020. According to their study, "Succession" has identified as one of the most used keywords by authors in family businesses. Likewise, succession and decision making has been examined together in many research within FB research area. These studies vary from research into decision making factors in the generational succession (Lago et al., 2022; Boyd, Botero and Fediuk, 2014; Shepherd and Zacharakis, 2000; Westhead, 2003; Bjuggren and Sund, 2001), decision making challenges of women entrepreneurs' succession process (Ramadani et al., 2017), succession and board decision making (Nyberg, Crogun and Schepker, 2021), and the role of strategic

decision and succession planning on FB performance (Tetteh et al., 2022). All those studies highlight the importance of the strategic decision making on succession process in ensuring the FB sustainability. Within all those studies, succession is accepted as a process, not an action in FB lifecycle, therefore, this process has stages and in family businesses it starts as soon as the predecessors goes into and lasts until the predecessor officially retires from the business (Cadieux, 2007). Studies of executive succession often involve the use of metaphors, and no metaphor has been more ubiquitous than that of “passing the baton” (Dyck et al., 2002). This process is not only passing the baton from the predecessor to the offspring, but also beyond this action. However, despite the importance of the CEO succession and the unfortunate consequences of not planning for it, according to 2021 Family Business Survey by PWC, globally, ‘only 24% of FBs have a robust, documented and communicated succession plan in place. FB succession process and its stages has been examined by many authors (Bozer, Levin and Santora, 2017; Groves, 2007; Sambrook, 2005; Le Breton Miller et al., 2004). However, Groves (2007) Integrated Leadership Development and Succession Planning model (Figure 1.) has been chosen to adopt this study as in this model, the succession decisions for managerial positions are driven by consideration of a diverse range of candidates. Among other functions, this approach based on the judgement of performance on merit, not nepotism.

Succession is accepted as one of the most important decision-making processes in FB life cycle and has been examined by many studies in FB literature. However, even though the AI can be used to support and/or replace human decision makers and is used within the three organisational decision-making levels, i.e. strategic, operational and tactical, it hasn’t been examined in FBs literature adequately. There is a paucity of research in the application of AI in FB and succession selection process.

Research method

The research question seeks to ask can AI identify the critical performance measures during the succession process in order to improve decision making process in succession planning. Even though family business succession process has been examined by many authors, there is no one size fit all model for the successful succession. However, as the decision making within the candidates and using the AI will be the central themes of this research study, we need to adopt a model that shows different performance measures that can be evaluated by the AI. Therefore, since Groves (2007) model identifies different stages of the FB succession and shows different attitudes of the best candidates during the process, it has been chosen as an umbrella model. The research will be based on the Delphi technique as it fits well with the type of study being investigated. It encourages problem solving and knowledge building best suited to tackling real-world and phenomenological problems and the justification comes from the fact that through iterative process of galvanising consensus from within a group of FB experts (Liu and Wilson, 2014). This research will be iterative and based on the Delphi method will involve three to four rounds of questions with 20-25 participants as an owner of FBs. (Savic and Smith, 2023). Addressing the research question of this study, entailed identifying the succession process from its planning to the end with its functions, relationship among those functions and people who joined this process as decision makers. As exploratory research, how can we use AI within this process will be identified by conducting multiple rounds of questions with FB owners who the most important characteristic of this important process.

Feedback Required

The focus of the paper is on succession planning and performance measures used in the selection process. Are there other avenues that the research could focus on to generate a better understanding of the challenges in using AI?

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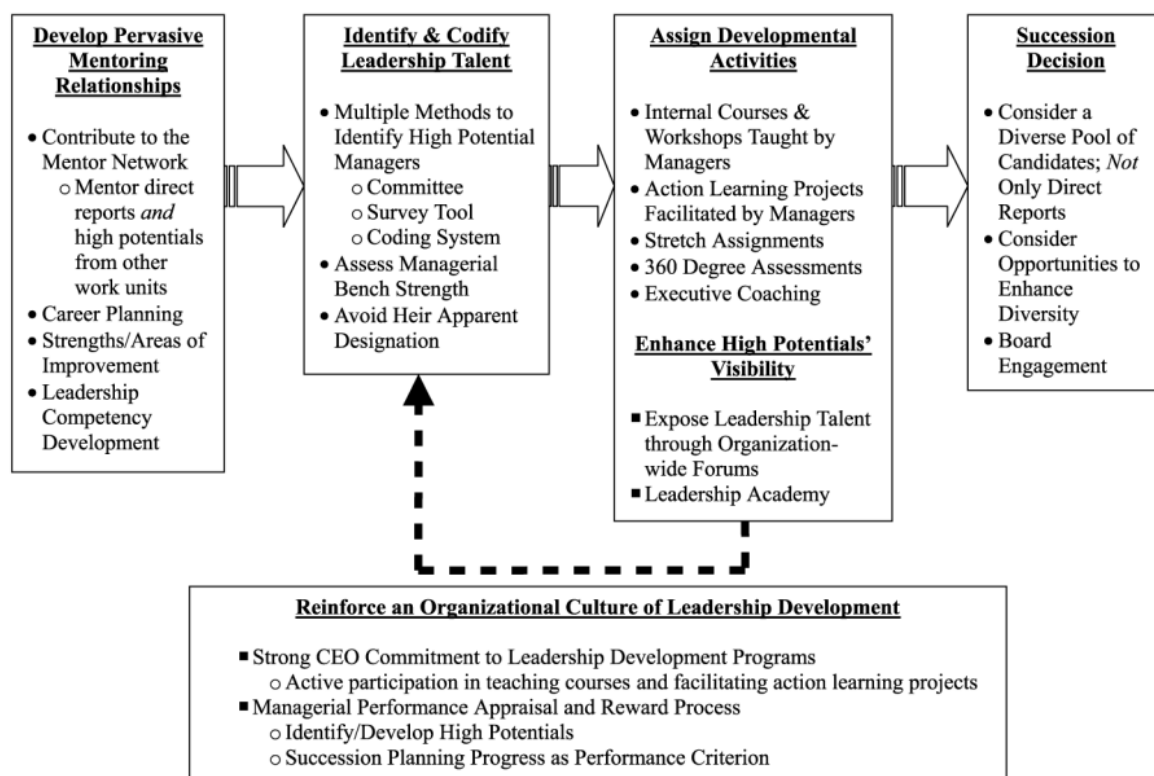
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Figure 1.



Source; Groves (2007); *Integrated Leadership Development and Succession Planning Process*